202306UECM1404OE4b

Start again

Review of preview

Started on	Tuesday, 5 September 2023, 03:22 PM
Completed on	Tuesday, 5 September 2023, 03:22 PM
Time taken	9 secs
Grade	**0** out of a maximum of 10 (**0**%)

1

Marks: 1

The one-year spot rate is 7.0%. A two year 600 bond maturing at par, with 6% annual coupon, is currently selling for its par value. Detrmine the two-year spot rate. _____

Answer:

Make comment or override grade

Incorrect
Correct answer: 0.059703
Marks for this submission: 0/1.

2

Marks: 1

You are given the following information about two bonds that will mature in 6-years at par:

	Bond A	Bond B
Par value	750	1050
Annual coupon rate	8%	4%
Price	500.0	735.0

Determine the 6-year spot rate. _____

Answer:

Make comment or override grade

Incorrect
Correct answer: 0.053052
Marks for this submission: 0/1.

3

Marks: 1

The following are the prices of 100 zero-coupon bonds redeemable at par:

Term to Maturity	Price
1	94.58
2	89.27
3	83.76
4	79.26

Determine the one-year forward rate deferred 3 years. _____

Answer:

Make comment or override grade

Incorrect
Correct answer: 0.056507

Marks for this submission: 0/1.

4 Marks: 1

The n-year spot rate of interest, s_n, is given by:

$$s_n = 0.03+n^2/1000 \text{ for } n = 1,2,...$$

Calculate the one-year forward rates applicable at times t = 8. _____

Answer: ✗

Make comment or override grade

Incorrect
Correct answer: 0.257
Marks for this submission: 0/1.

5 Marks: 1

A perpetuity-immediate has annual payments of 1.03, 1.03^2, 1.03^3,.... Determine the duration of this perpetuity at an effective rate of 6%. _____

Answer: ✗

Make comment or override grade

Incorrect
Correct answer: 35.333333
Marks for this submission: 0/1.

6 Marks: 1

A company makes a loan and receives level annual repayments from the borrowers at the end of each year for 11 years. The effective rate of interest is 8.29%. What is the modified duration of the loan repayments? _____

Answer: ✗

Make comment or override grade

Incorrect
Correct answer: 4.814536
Marks for this submission: 0/1.

7 Marks: 1

An investment will return 2,000 in two years and 7,000 in five years. Determine the ratio of the convexity of the payments to their modified duration, evaluated at i = 8.3%. _____

Answer: ✗

Make comment or override grade

Incorrect
Correct answer: 5.189
Marks for this submission: 0/1.

8 Marks: 1

A company must pay a liability of 3000 in 2-years. Zero coupon bonds with terms of 1 year and 4 years are available for investment. The effective rate of interest is 7.5%. Determine how much of 1 year bond should the company buy in order to achieve full immunization. _____

Answer: ✗

Make comment or override grade

Incorrect
Correct answer: 1860.47
Marks for this submission: 0/1.

9 Marks: 1

16,000 is invested on January 1, 2023. On July 1, 2023, the balance is 20,800. Immediately after calculation of this balance, 1,456 is withdrawn from the account. 24,960 is in the account on January 1, 2024. What is the time-weighted rate of return over 2023? _____

Answer: ✗

Make comment or override grade

Incorrect
Correct answer: 0.6774
Marks for this submission: 0/1.

10
Marks: 1

The following table gives information concerning an investment fund:

Calendar Year	2023	2024	2025	2026
	RM millions	RM millions	RM millions	RM millions
Value of fund at 30 June	-	480	580	660
Net cash flow received on 1 July	-	50	48	65
Value of fund at 31 December	430	550	600	X

If the time weighted rate of return earned on the fund during the period from 31 December 2023 to 31 December 2026 is 9% per annum effective, calculate X, the value of the fund on 31 December 2026. _____

Answer:

Make comment or override grade

Incorrect
Correct answer: 731.321435
Marks for this submission: 0/1.